

COMPLETE LISTING OF THE CLAIMS

Claims 1-18 (Cancelled).

Claim 19 (Original): An inkjet recording method comprising:
discharging an ink from a nozzle of a recording head containing the ink in an ink room to form an ink image on a recording material,
wherein the recording head comprises:
the nozzle;
the ink room containing the ink to be discharged;
an ink-flow-regulating portion regulating flow of the ink to the ink room;
a vibrating plate vibrating to discharge the ink from the nozzle, and
wherein the ink comprises:
a colorant; and
a solvent,
wherein a zeta potential ζ between the colorant and any one or more of the materials constituting the nozzle, the ink room, the ink-flow-regulating portion and the vibrating plate is from 0 to -50 mV at a pH of from 6.5 to 11.5.

Claim 20 (Original): The inkjet recording method according to claim 19, wherein each of the materials constituting the nozzle, the ink room, the ink-flow-regulating portion and the vibrating plate is a material selected from the group consisting of silicon, glass, silicon oxide, titanium oxide, chromium oxide, titanium nitride, silicon nitride, zirconium and polyimide.

Claim 21 (Original): The inkjet recording method according to claim 20, the material being silicon, wherein the silicon is one selected from the group consisting of single crystal silicon and polysilicone.

Claim 22 (Original): The inkjet recording method according to claim 20, the material being glass, wherein the glass is selected from the group consisting of borosilicate glass, photosensitive glass, quartz glass and soda lime glass.

Claim 23 (Original): The inkjet recording method according to claim 19, wherein each of the ink room, the ink-flow-regulating portion, the vibrating plate and the nozzle is formed by a method selected from the group consisting of etching treatments, sand-blasting treatments, excimer laser treatments, and drilling treatments.

Claim 24 (Original): The inkjet recording method according to claim 19, wherein the ink further has an ink zeta potential 1 not greater than -20 mV at a pH of from 6.5 to 11.5.

Claim 25 (Original): The inkjet recording method according to claim 19, wherein the colorant is a colorant covered with a resin or a colored particulate resin.

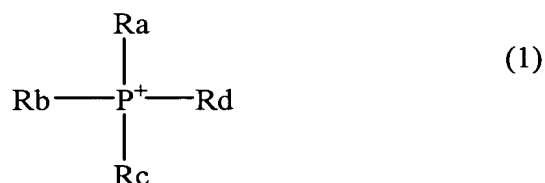
Claim 26 (Original): The inkjet recording method according to claim 19, wherein the colorant comprises a cationic colorant.

Claim 27 (Original): The inkjet recording method according to claim 26, wherein the cationic colorant is a colorant selected from the group consisting of cationic dyes, cationic carbon black and cationic pigments.

Claim 28 (Original): The inkjet recording method according to claim 19, wherein the ink further comprises a corrosion inhibitor.

Claim 29 (Original): The inkjet recording method according to claim 28, wherein the corrosion inhibitor comprises a cationic compound selected from the group consisting of cationic resins and cationic surfactants.

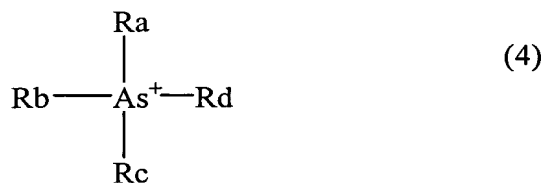
Claim 30 (Original): The inkjet recording method according to claim 28, wherein the corrosion inhibitor comprises a cation selected from the group consisting of ions having the following formula (1):



wherein Ra, Rb, Rc and Rd independently represent a linear, branched or ring alkyl group having 1 to 4 carbon atoms, a hydroxyalkyl group, a halogenated alkyl group, or a substituted or unsubstituted phenyl group; ions having the following formula (3):



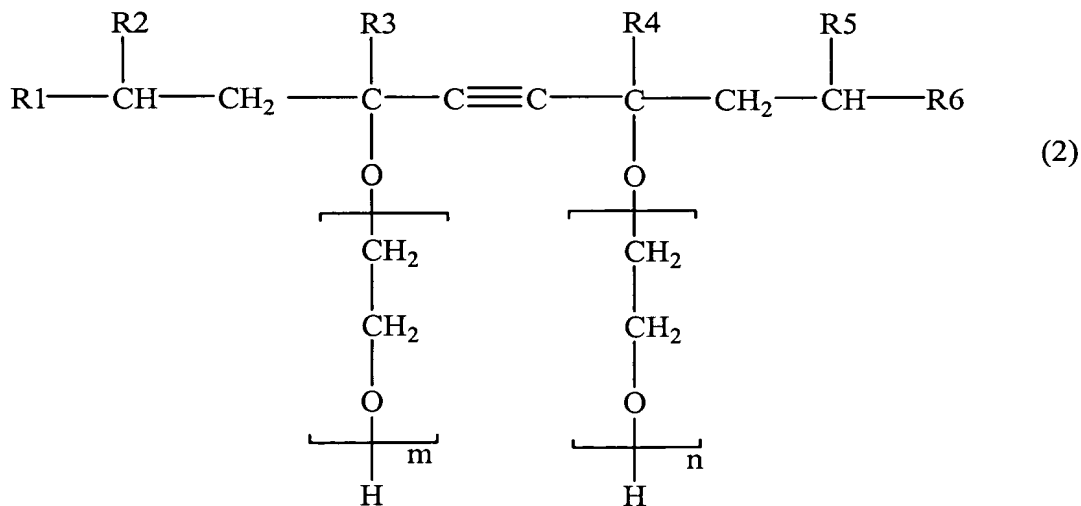
wherein Ra, Rb and Rc independently represent a linear, branched or ring alkyl group having 1 to 4 carbon atoms, a hydroxyalkyl group, a halogenated alkyl group, or a substituted or unsubstituted phenyl group; ions having the following formula (4):



wherein Ra, Rb, Rc and Rd independently represent a linear, branched or ring alkyl group having 1 to 4 carbon atoms, a hydroxyalkyl group, a halogenated alkyl group, or a substituted or unsubstituted phenyl group; a beryllium ion Be^{2+} ; an aluminum ion Al^{3+} ; a zinc ion Zn^{2+} ; a titanium ion Ti^{4+} ; a zirconium ion Zr^{4+} ; and a silicide ion Si^{2+} .

Claim 31 (Original): The inkjet recording method according to claim 19, wherein the corrosion inhibitor comprises a compound comprising a boron atom.

Claim 32 (Original): The inkjet recording method according to claim 19, wherein the corrosion inhibitor comprises an acetylene compound having the following formula (2):



wherein R1 to R6 independently represent a linear alkyl group having from 1 to 5 carbon atoms; and m and n independently are 0 or an integer of from 1 to 20.

Claim 33 (Original): The inkjet recording method according to claim 28, wherein the corrosion inhibitor is included in the ink composition in an amount of from 0.05% to 5.0% based on total weight of the ink composition.

Claim 34 (Original): The inkjet recording method according to claim 33, wherein the corrosion inhibitor is included in the ink composition in an amount of from 0.1% to 2.0% based on total weight of the ink composition.

Claim 35 (Original): The inkjet recording method according to claim 34, wherein the corrosion inhibitor is included in the ink composition in an amount of from 0.2% to 0.8% based on total weight of the ink composition.

Claim 36 (Original): An ink cartridge comprising:
an ink container containing an ink,
wherein the ink comprises:
a colorant; and
a solvent,
wherein a zeta potential ≥ 2 between the colorant and at least one material selected from the group consisting of silicon, glass, silicon oxide, titanium oxide, chromium oxide, titanium nitride, silicon nitride, zirconium and polyimide is from 0 to -50 mV at a pH of from 6.5 to 11.5.

Claim 37 (Original): The ink cartridge according to claim 36, wherein the colorant is a microencapsulated colorant.

Claim 38 (Original): An ink cartridge comprising:

- an ink container containing an ink; and
- a recording head comprising:
 - a nozzle from which the ink is discharged to form an ink image on a recording material;
 - an ink room containing the ink to be discharged;
 - an ink-flow-regulating portion regulating flow of the ink to the ink room; and
 - a vibrating plate vibrating to discharge the ink from the nozzle, and

wherein the ink comprises:

- a colorant; and
- a solvent,

wherein a zeta potential 2 between the colorant and any one or more of the materials constituting the nozzle, the ink room, the ink-flow-regulating portion and the vibrating plate is from 0 to -50 mV at a pH of from 6.5 to 11.5.

Claim 39 (Original): The ink cartridge according to claim 38, wherein each of the materials constituting the nozzle, the ink room, the ink-flow-regulating portion and the vibrating plate is a material selected from the group consisting of silicon, glass, silicon oxide, titanium oxide, chromium oxide, titanium nitride, silicon nitride, zirconium and polyimide.

Claim 40 (Original): The ink cartridge according to claim 39, the material being silicon, wherein the silicon is one selected from the group consisting of single crystal silicon and polysilicone.

Claim 41 (Original): The ink cartridge according to claim 39, the material being glass, wherein the glass is selected from the group consisting of borosilicate glass, photosensitive glass, quartz glass and soda lime glass.

Claim 42 (Original): The ink cartridge according to claim 40, wherein the ink room, the ink-flow-regulating portion, the vibrating plate and the nozzle are constituted of single crystal silicon, wherein the ink room, the ink-flow-regulating portion, the vibrating plate and the nozzle are formed by an etching treatment.

Claim 43 (Original): An inkjet recording apparatus comprising:
a recording head configured to discharge an ink from a nozzle to form an ink image on a recording material; and
an ink cartridge configured to contain the ink therein, wherein the ink cartridge is the ink cartridge according to claim 36.

Claim 44 (Original): An inkjet recording apparatus comprising:
an ink cartridge configured to contain an ink therein and discharge the ink from a nozzle to form an image on a recording material; and
a carriage configured to carry the ink cartridge to form an image on a recording paper, wherein the ink cartridge is the ink cartridge according to claim 38.

Claims 45-46 (Cancelled).